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**COMMUNICATION FROM THE COMMISSION  
TO THE COUNCIL AND THE EUROPEAN PARLIAMENT**

**ON A FIRST ASSESSMENT OF NATIONAL ENERGY EFFICIENCY ACTION  
PLANS AS REQUIRED BY DIRECTIVE 2006/32/EC ON ENERGY END-USE  
EFFICIENCY AND ENERGY SERVICES**

**MOVING FORWARD TOGETHER ON ENERGY EFFICIENCY**

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**1. ENERGY EFFICIENCY AND THE ENERGY SERVICES DIRECTIVE IN  
THE EU'S INTEGRATED CLIMATE AND ENERGY POLICY**

In its March 2007 conclusions<sup>1</sup>, the European Council identified energy efficiency as an essential part of the comprehensive strategy on climate change and energy, and stressed the need to achieve the objective of a 20% saving of EU energy consumption<sup>2</sup> by 2020. The European Council added that good use should be made of National Energy Efficiency Action Plans<sup>3</sup> for this purpose. This was also underlined already in 2005 by the European Parliament.<sup>4</sup>

Energy conservation and energy efficiency improvements are of increasing importance in the approach to sustainability and security of energy supply and efforts to reduce greenhouse gas emissions. The National Energy Efficiency Action Plans (NEEAPs) provide practical demonstration of the commitment of Member States. Importantly, the plans provide a means for the sharing of best practices among the many players in energy efficiency, at every level, and for developing synergies among the strategies and measures adopted.

Efficiency improvements already achieved have contributed to a decrease in energy intensity<sup>5</sup> of the EU economy. However, despite this, total energy consumption in Europe is still increasing, with consequent increases in CO<sub>2</sub> emissions and fossil fuel import dependence.

This report is a response by the Commission to its obligation under the Directive on energy end-use efficiency and energy services<sup>6</sup> to assess and report on the NEEAPs. It can only be a partial response at this stage because not all of the Member States have submitted their NEEAPs<sup>7</sup> and few submitted in time to allow for sufficient assessment. Thus, more comprehensive reporting on each of the NEEAPs will be carried out as they are notified to the Commission.

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<sup>1</sup> Council document 7224/07 REV1

<sup>2</sup> 20% saving compared to projected 2020 energy consumption; see Action Plan for Energy Efficiency, COM (2006) 545.

<sup>3</sup> Directive 2006/32/EC on energy end-use efficiency and energy services, Art 14

<sup>4</sup> Vidal-Quadras report, INI 2005/2010

<sup>5</sup> Energy intensity is total primary energy consumption per unit of GDP

<sup>6</sup> Directive 2006/32/EC, Art 14.5

<sup>7</sup> Infringement procedures ongoing against 10 Member States, December 2007

With this report, based on the 17 NEEAPs submitted by 1 December 2007<sup>8</sup>, the Commission gives a first assessment of the strategies adopted by Member States, focusing on the measures that appear to be examples of good practice with particular emphasis on the exemplary role of the public sector and the provision of information, which the Member States were required by the Directive to report on in their first NEEAP. The momentum of these strategies and initiatives needs to be increased. For its part, the Commission will facilitate mutual support in implementation and will introduce a number of new initiatives, strengthening the EU framework for energy efficiency in the various end-use sectors.

The relevance of effective strategies to improve energy efficiency to the EU's integrated climate and energy policy cannot be overstated. The technical and economic potential for cost-effective energy efficiency improvements is well-researched and widely recognised, as are the obstacles that need to be overcome<sup>9</sup>. With effective implementation of policies to overcome these barriers, energy efficiency improvements can make a very substantial contribution to achieving the EU's objectives. For example, if the reduction in energy consumption among final users targeted in the Directive on energy end-use efficiency and energy services could be achieved, the CO<sub>2</sub> savings in 2020 would be 393 Mt, as compared to a business-as-usual scenario (For more details, see Annex 1). This corresponds to almost 10% of the EU's 1990 emissions<sup>10</sup>. At the same time, with significantly reduced energy demand, the need for imports of fossil fuel would diminish, the energy import bill would be reduced correspondingly and consumers should see lower bills.

Support for a continued strong strategic focus on energy efficiency looks solid. The EU's 2020 commitments on greenhouse gas emissions, renewable energy sources and energy efficiency should underpin policy stability at every level and should encourage investors, consumers and other players in the various sectors of energy supply and use. The internal energy market should provide improved market access and consumer choice, indeed new markets, in the coming years<sup>11</sup>. Frameworks for global markets for energy-efficient products and services and for technology cooperation will evolve, as global trade and investment expand and a global agreement on climate change is constructed.

The emphasis now must be on effective implementation of strategies and measures, including the development of best practice and synergies.

## **2. THE ENERGY SERVICES DIRECTIVE - IMPLEMENTATION TO DATE**

The Directive requires Member States to adopt a 9% indicative energy end-use<sup>12</sup> savings target in 2016 and to put in place institutional and legal frameworks and measures needed to remove barriers to efficient energy end-use. It is intended to act as a catalyst for renewed and more ambitious energy efficiency initiatives at all levels of European society – local, regional,

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<sup>8</sup> [http://ec.europa.eu/energy/demand/legislation/end\\_use\\_en.htm#efficiency](http://ec.europa.eu/energy/demand/legislation/end_use_en.htm#efficiency)

<sup>9</sup> See Impact Assessment for Energy Efficiency Action Plan, for example (SEC (2006) 1174).

<sup>10</sup> As explained in Annex 1, this is a maximum estimate for the possible effects; this is equivalent to almost 10% of the EU's 1990 CO<sub>2</sub> emission but it does not mean a 10% reduction below the 1990 level given that the business as usual increase of CO<sub>2</sub> must first be avoided.

<sup>11</sup> See 3<sup>rd</sup> internal energy market package, September 2007 (COM (2007) 528; COM (2007) 529; COM (2007) 530; COM (2007) 531; COM (2007) 532).

<sup>12</sup> The emissions trading sector is outside the scope of Directive 2006/32/EC

national and Community. It should create the necessary conditions for the development and promotion of a market for energy services and the delivery of energy efficiency to end-users.

Each Member State was required to prepare a NEEAP and to notify it to the Commission by 30 June 2007. NEEAPs should set out national strategies, charting the way forward, and should not be regarded as a bureaucratic exercise. Subsequent implementation, monitoring and evaluation of the strategy and the measures identified, complemented by bench-marking and a 'peer review' process at European level, should help Member States to learn from the successes and mistakes of others and should facilitate the diffusion of best practices throughout the EU.

For the purpose of the first NEEAP, each Member State should have adopted an overall national indicative savings target of 9% or higher, to be achieved by the end of 2016, and an intermediate national indicative savings target for 2010.<sup>13</sup> They should also show in their first NEEAPs how they intend to reach these energy savings targets, describing the strategy and measures being put in place to achieve them. They should show, in particular, how they intend to comply with the provisions on the exemplary role of the public sector and the provision of information and advice on energy efficiency to end users.<sup>14</sup>

### **Member State notifications of first NEEAP**

When the notification deadline expired, the Commission had received NEEAPs from only two Member States, Finland and the UK. Since then, another fifteen Member States have notified plans - Austria, Bulgaria, the Czech Republic, Cyprus, Denmark, Estonia, Germany, Ireland, Italy, Lithuania, Malta, the Netherlands, Poland, Romania, and Spain. Infringement Procedures for failure to notify the first NEEAP to the Commission were launched on October 17 for the remaining Member States. Belgium and the Slovak Republic submitted their NEEAPs at the end of December 2007, too late to be included in the assessment.

## **3. NATIONAL ENERGY EFFICIENCY ACTION PLANS – A FIRST ASSESSMENT**

This first assessment is by no means exhaustive and is not based on scientific evaluation methodology. It provides a first overview of the range of strategies and measures being presented by the Member States and a first identification of examples of good practices which merit closer examination. The Commission has concentrated on reviewing the part of the strategies addressing the exemplary role of the public sector and information. The suitability of any particular measure or the design of any particular mechanism will depend on the context within which they are implemented, the nature of existing legal and regulatory framework and political, and organizational and social culture issues, inter alia.

### **Level of ambition**

A first review of the 17 NEEAPs submitted by the Member States mentioned above<sup>15</sup>, shows that five Member States have adopted a savings target that goes beyond the minimum

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<sup>13</sup> According to paragraph 2 of Article 4 of the Directive, the national energy savings shall be measured as from 1 January 2008

<sup>14</sup> Article 14(2) of the Directive

<sup>15</sup> The review includes all NEEAPs notified to the Commission by 1 December 2007

indicative target of 9% – Cyprus (10%), Lithuania (11%), Italy (9.6%), Romania (13.5%), and Spain (11% by 2012).

Several Member States, notably Ireland, the Netherlands and the United Kingdom, say they intend to achieve higher savings targets. The Commission welcomes their ambitions. However, there is a risk that the lack of clear formal commitments may confuse the strong signal in favour of energy efficiency to market actors. They would expect governments to gear up to their political commitments by providing ambitious initiatives to create a favourable business environment, with longer term, predictable investment conditions, for the increased uptake of energy efficiency.

Several NEEAPs envisage a sizeable part of the total savings over the nine-year period coming from so called existing or 'early actions'<sup>16</sup>.

Six NEEAPs<sup>17</sup> do not cover the entire nine-year period required by the Directive<sup>18</sup>. This makes any assessment of the likelihood of these strategies achieving their 2016 savings target difficult, in the absence of assumptions about measures to be adopted in the future.

### **The exemplary role of the public sector**

In the Directive, the public sector is required to play an exemplary role, encouraging other actors to undertake energy efficiency actions across all sectors of the economy. Several Member States have set out comprehensive action plans in this field, demonstrating that they are stepping up to the challenge and leading by example.

Compared to business-as-usual, Ireland, for example, has adopted an ambitious public sector savings target of 33% by 2020, and Germany has committed to a 2012 CO<sub>2</sub> reduction target of 30% for the public sector compared with 1990 levels, to be achieved mainly through energy efficiency improvement measures. The United Kingdom aims for carbon neutral central government buildings by 2012.

To achieve its target, Ireland is putting in place a comprehensive programme of measures and will communicate its exemplary role via its national Power of One campaign<sup>19</sup>. Mechanisms will be established to promote exchange of best practices and replication of good ideas among public sector bodies, at local, national and international level.

Germany is putting in place a major retrofit programme for its federal buildings, allocating 120 Million Euro per year to it over a four year period, from 2008-2012. It is also piloting an energy performance contracting project with the view to expanding its use in the public sector.

Among a range of measures in the public sector, Denmark will require the use of energy audits. All resultant recommendations<sup>20</sup> with a pay-back period of 5 years or less will be required to be implemented. Similarly, Malta is providing for public sector leadership, one of

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<sup>16</sup> See point 3 of Annex IV of Directive 2006/32/EC

<sup>17</sup> Bulgaria 2008-2010; Denmark 2005-2012; Estonia 2008-2013; Lithuania 2007-2010; Romania 2007-2010; and Spain 2004-2012

<sup>18</sup> Article 4(2)

<sup>19</sup> <http://www.powerofone.ie/>

<sup>20</sup> Item (e) listed in Annex VI of the Directive, at least two of the measures listed must be used

the innovative aspects of its strategy being the appointment of Green Leaders in each Ministry. The Green Leaders will champion energy efficiency and renewables initiatives something which is likely to significantly improve progress and performance.

The United Kingdom also vies to show public sector leadership and to ensure that it plays an exemplary role. For example, it will apply the Code for Sustainable Homes to all its housing developments, requiring all new homes built with government funding to comply with the Code's Level 3 – a 25% energy performance improvement compared to the 2006 building code. Austria plans for its public sector buildings to be shining examples, with energy performance always going beyond the legal requirements.

Finland plans to extend its voluntary agreements and mandatory information and communication actions, currently in place for municipal buildings, to also cover national public sector buildings and operations.

Spain will introduce programmes to update obsolete public street lighting systems with modern and more efficient equipment and also indicates energy efficiency improvements in the treatment and supply of drinking water.

Through its Economic Energy Management Programme, Poland is placing an obligation on the public sector to implement the necessary measures to achieve energy savings at a level not lower than the national target.

The Netherlands aspires to be a European frontrunner in sustainable public procurement. By 2010, 100% of national public procurement will include sustainable procurement criteria and 50% for local and regional government. It also plans to use its purchasing power to encourage the development of innovative concepts, products and services in the housing and transport sector.

Based on the NEEAPs, it seems that some Member States have been slow to fully embrace the opportunity of the public sector to play an exemplary role. Several Member States state that they will comply with the provisions of the Directive but do not clearly describe how. It is evident that clear information is important, as a demonstration of the commitment of government to energy efficiency. This would in turn provide valuable encouragement to businesses to invest in energy efficiency and develop future markets for energy efficient products and energy services.

### **Promoting energy efficiency: awareness raising, education and training**

Member States can encourage energy savings in all sectors by raising awareness of the need for taking action and the practical possibilities available. The Directive requires Member States to ensure that information on energy efficiency mechanisms and financial and legal frameworks is transparent and widely disseminated to relevant market actors, and to promote energy end-use efficiency. They should ensure that information on best energy savings practices is widely available. Such information measures, coupled with clear price signals, tariffs encouraging energy efficiency and better feedback on actual consumption, through improved billing and smart meters, should put end-users in a position to take better-informed decisions on their energy use and on taking up energy efficiency incentives.

From the NEEAPs, it seems that most Member States will advocate energy efficiency via general information campaigns and/or targeted efforts linked to incentive schemes. The Irish

Power of One campaign is an example of a very comprehensive multi-media campaign, encompassing different types and sources of energy; impacts of inefficient use in terms of costs to users, the economy and the environment; best practices at home and at work; and a broad array of communication channels - press ads, website, road show, direct mail, utility bill inserts, schools programmes, seminars and sponsorship, TV-programme, and qualification, accreditation and certification schemes.

Consumer feedback is being developed, with smart meters, improved energy bills or various calculators. In the United Kingdom, a carbon footprint calculator will provide consumers with a better view of how their energy use impacts the environment as well as suggestions on how consumers can reduce their energy use. Estonia is planning to improve billing information by providing comparative consumption data to different consumer groups for the most significant fuels and energy carriers. This can both raise awareness and trigger action.

### **Promoting energy efficiency: providing incentives and mechanisms**

#### ***Financial and fiscal incentives***

Financial and fiscal incentives are important in reducing transaction costs and perceived risks associated with adopting new technologies and novel practices. The NEEAPs present an array of incentive programmes.<sup>21</sup> Many are horizontal in nature, addressing more than one sector. Germany, for example, will expand its CO<sub>2</sub> Building Retrofit Programme, with the goal of doubling its rate of thermal retrofitting of buildings from 1.3 to 2.6% per year by 2016. Considerable expansion of *passive* or low energy buildings is being promoted in the private sector as well as at the federal, regional and local government level. As buildings account for 40% of total final energy use, effective promotion of passive standard buildings could enable very high energy savings in this largest end-use sector.

Austria has a similar buildings programme targeting both the public and the private sectors. This should contribute to Austria's objective of reducing its energy intensity by 5% by 2010, 20% by 2020, compared to business-as-usual.

Lithuania is proposing a reduced value added tax rate of 9% - the standard rate is 18% - to be applied to suppliers of services relating to construction, renovation and insulation of residential houses financed with state and municipal budget resources as well as with soft credits granted by the state and special state funds for the building sector. The Netherlands will put in place an Energy Investment Deduction, a tax rebate scheme for private companies, which can be applied to the purchase or production of energy efficient equipment and sustainable energy. In 2007 Italy set up a scheme that provides for a gross tax deduction of up to 55% of the amounts payable by taxpayers for a wide range of equipment such as condensing boilers, A+ rated refrigerators, electric motors, lighting equipment and for energy efficiency building refurbishment.

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<sup>21</sup> Fiscal incentives are important but not the only instrument that can be used for promoting energy efficiency, as pointed out in the Communication on the Action Plan for Energy Efficiency: Realising the Potential ((COM (2006) 545), price signals reflecting costs are also important for improving energy efficiency and for overall economic efficiency.

## Voluntary agreements

In Finland, voluntary agreements between the national government and public and private sector actors are common. They currently cover around 60% of final energy use in the eight sectors they cover. The objective is that 90% will be covered by 2016. Government subsidised energy audits are used to determine the potential and set targets to be achieved. Monitoring and evaluation ensures bottom-up feedback on the energy savings achieved. The Netherlands also uses such voluntary agreements<sup>22</sup> in pursuit of energy efficiency improvements in the industry, tertiary and agricultural sectors. The Danish “A-club”, where public and private organisations commit to energy efficient procurement, is an example of a less complex voluntary agreement.

Spain and Poland also plan to introduce voluntary agreements as a key instrument to achieve energy saving in the industrial sector. In 2008, Romania foresees the signature of voluntary agreements with industrial operators. The United Kingdom will continue the Climate Change Agreements. In Ireland the agreements have a strong obligation to introduce energy management.

## Market Based Instruments

A number of Member States indicate that a major part of their saving obligation will be met through the continuation or expansion of market based instruments for the promotion of energy efficiency.

In the United Kingdom the Energy Efficiency Commitments (EEC), which imposes obligations on energy suppliers to implement energy efficiency in the residential sector, will be extended until 2020. It has been renamed the Carbon Emission Reduction Target and will have a savings target almost double that of its predecessor, the EEC, for the period 2008-2011. In addition a voluntary cap-and-trade scheme, the Carbon Reduction Commitment, which will cover large non-energy intensive sectors, and the private and the public sector, will be implemented.

In Italy its white certificates scheme will be in place until 2014<sup>23</sup>. The Italian scheme has resulted in the expansion of the local energy services industry. Poland is also proposing to put in place a white certificate scheme to encourage energy savings in combination with an obligation placed on suppliers of electricity, heat or gas fuels to end users.

Denmark places an obligation on distribution companies to achieve a fixed amount of energy savings each year.

## Energy Service Companies (ESCOs)

A number of Member States (Italy, Spain, Ireland, Austria, Poland, and Germany) mention the importance of promoting ESCOs and the use of performance contracting to expand the market for energy efficiency and energy services. The provision of commercial energy services and a market for energy efficiency are important objectives of the Directive.

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<sup>22</sup> In the Netherlands and Romania referred to as 'Long Term Agreements'

<sup>23</sup> The last annual target is set for 2009 but in its NEEAP the Italian government announces its intention to extend the scheme with a new phase after 2009.

### ***Funds and funding mechanisms***

Bulgaria has established the credit facilities targeting the commercial and residential sectors respectively.

Romania has initiated a national programme for thermal rehabilitation of multi-storey residential buildings, 34% of the financing stems from the national budget, 33% from local authorities and 33% from resident associations' maintenance funds. Romania will also develop bonus-type support schemes for high efficiency co-generation.

The United Kingdom, through its Carbon Trust, has established a range of financial mechanisms or revolving funds. The Trust provides loans to organisations that provide matching funding and establish a 'ring-fenced' energy efficiency fund. Recycled energy savings are split between the revolving fund and front-line services. SMEs and industry are targeted in these funds. For the public sector, there is a Revolving Loan Fund (Salix).

### **Promoting energy efficiency: providing the institutional infrastructure to make it happen**

Providing information, education and training requires a certain institutional structure and capacity, often including networks of public and private sector organizations, all working together to deliver energy efficiency.

Most Member States have energy agencies. They play an important part in the implementation of energy efficiency policies and programmes. Agency mandates and scope differ. For example, in Denmark the Electricity Saving Trust addresses the residential and public sectors, mostly focusing on appliances and behaviour through campaigns and rebates. A new centre is being set up specifically to address energy savings in buildings. Local energy conservation committees will coordinate all local initiatives, including those by the distribution companies. In Italy, regional and local energy agencies act on behalf of the national government in the field of information and communication. This is a decentralized approach allowing proximity to target groups. As there are more than 350 local and regional agencies in the EU, this approach could be replicated in other Member States to make better use of the resources that these agencies represent.

### **Transport and spatial planning**

Most Member States face considerable challenges in the transport sector and many of those that have experienced rapid growth and heavy increase in private car ownership recognize that radical measures may now be necessary to reverse the trend. Both Ireland and Austria are presenting measures concerning spatial planning aiming at reducing energy use and emissions and improving the quality and extent of the transport infrastructure, inter alia. As part of its Transport 21 initiative, Ireland is promoting modal shift to public transport through considerable investments in public transport services and infrastructure. It aims to strengthen the relationship between land-use and transport to enhance energy efficiency and sustainability of the sector. It is also implementing an energy demand management strategy, including the provision of specific advice on energy use and efficiency to fleet managers and tools to help car buyers choose more fuel efficient cars.

Through eco-driving initiatives Member States are aiming to improve the fuel efficiency of vehicles, thereby reducing greenhouse gas emissions, improving road safety and reducing the

number of accidents. Ireland, the Netherlands and the United Kingdom are all promoting changes in behaviour through eco-driving initiatives.

### **Lessons to be learned:**

Among the NEEAPs reviewed by the Commission, several present comprehensive strategies and plans that are likely to deliver savings beyond the required 9%. Some of those taking a forward and progressive approach admit to not knowing as yet what all the new measures will be and what form they will take. However, most seem to present a business-as-usual approach, not a staking out of forward looking and visionary strategies. Thus, a first assessment of the NEEAPs gives some encouragement but seems to indicate a considerable gap in several Member States between the political commitment to energy efficiency, on the one hand, and the measures adopted or planned, as reported in the NEEAPs, and the resources allocated to preparing it, on the other.

## **4. MOVING FORWARD TOGETHER - THE AGENDA**

### **Implementation, mutual support, stakeholder involvement**

#### *Monitoring transposition*

In the coming months, the NEEAPs received by the Commission will be subject to analyses to assess whether they seem realistic with regard to achieving the savings targets identified in the plans. The Commission will consult with Member States on the review of NEEAPs before the assessment is published. Meanwhile the infringement procedure against the Member States that have yet to notify NEEAPs continues, and the Commission will closely follow the further transposition of the Directive.

#### *Facilitating implementation*

The Energy Services Directive is challenging, but potentially very rewarding for Member States. That is why the Commission has suggested that Member States establish a Concerted Action on the Directive under the 2008 Intelligent Energy Europe Work Programme. The purpose of the Concerted Action is to facilitate the exchange of experiences between Member States and ensure a more rapid uptake of best practices throughout the Community. It aims to build capacity and transfer knowledge in these areas in order to reap the benefits of the experiences already gained by other Member States and preparing the ground for the development of the second NEEAPs.

#### *Stakeholder involvement*

The Commission will launch a web-based stakeholder platform to gather and present stakeholder input. Industries and their umbrella organizations, local and regional actors, as well as non-governmental organizations representing consumers and environmental interests all have an important role to play in the implementation of the Directive. The Energy Efficiency Watch project<sup>24</sup>, co-funded by the Intelligent Energy Europe Programme, and supported by Members of the European Parliament, will also assess NEEAPs. Their findings may also be valuable to Member States. By providing knowledge based input, stakeholders

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<sup>24</sup> <http://www.energy-efficiency-watch.org/>

can make valuable contributions to the development and choice of Member State measures, thereby making sure important opportunities for realizing energy efficiency measures are not being overlooked. These activities taken together should hopefully contribute to a smoother transposition of the Directive and to easing the implementation of Member State NEEAPs. Finally, they should also prepare the ground for the work on preparing the second NEEAPs, which are due to be submitted to the Commission by 30 June 2011.

An overview of the Commission's other energy efficiency related initiatives are summarized in Annex 2.

## **5. CONCLUSIONS**

NEEAPs offer an opportunity to focus on energy efficiency, an issue of strategic importance to the achievement of the EU's goals. A first examination of the plans gives some encouragement. However, it seems also to indicate a considerable gap in several Member States between the political commitment to energy efficiency and the measures adopted or planned, as reported in the NEEAPs, and the resources attributed to preparing it.

Among the seventeen NEEAPs reviewed by the Commission, several present comprehensive strategies and plans likely to deliver savings beyond the required 9%. However, many seem to present a business-as-usual approach. The Commission looks forward to further plans and to the exchange of experience and best practice. The Commission will do its part to help Member States with their implementation of the plans.

This focus on energy efficiency in EU energy policy is justified. Looking to global challenges of climate change, security of supply and development, widespread improvements in energy efficiency must play a fundamental role.

Global markets for energy-efficient products and services will be very large, and players in the lead markets which the EU and its Member States are constructing by their various policy actions will be in a strong position. In a similar way, cooperation on energy efficiency can be made a positive force in international relations. The Commission's initiative on an international platform on energy efficiency is intended to help develop standards, trade and technology transfer.

Progress towards strategic objectives agreed in March 2007 will be assessed in the 2nd Strategic Energy Review. The Review should help in formulating recommendations for future policy development, and in taking forward further work on an EU energy policy for Europe. This will certainly include energy efficiency.

## **ANNEX 1: Calculation of CO<sub>2</sub> benefits from the achievement of the saving targets set by Energy Services Directive**

This annex provides an estimate of the CO<sub>2</sub> benefits from the achievement of the saving targets set by the Directive with a perspective towards the 2020 objectives. The calculation assumes that all Member States use 9% less of the current final energy consumption in 2016 compared with what they would do under business-as-usual. The reference development used is the PRIMES<sup>25</sup> baseline of 2007. It includes energy and climate policies implemented in the Member States up to the end of 2006. As the fuel mix of the actual savings in 2016 cannot be known in advance, a saving of 9% is assumed for each fuel, i.e. the structure of final energy demand does not change. It is assumed that the transformation sectors develop as in the baseline.

The calculations exclude energy intensive sectors, as the Energy Services Directive does not cover the undertakings in the European Emission Trading Scheme (ETS). Statistics on energy intensive industries also include energy consumption from small installations in energy intensive sectors that do not fall under the ETS. This effect is (partly) compensated for by not deducting the energy consumption from armed forces (which are also excluded from the ESD).

With these assumptions, the CO<sub>2</sub> benefits of achieving the 9% savings target in 2016 can be estimated at 275 Mt CO<sub>2</sub> for EU-27. Assuming that energy efficiency policies along the lines of ESD will not cease in 2016 but continue for a few more years with roughly one additional percentage point saving per year gives cumulative savings of 13% for 2020. This would lead to CO<sub>2</sub> savings of 393 Mt CO<sub>2</sub> in 2020. The following table gives an overview of effects.

### *Effects of end-use energy efficiency improvements through ESD*

	2016	2020
Reduction below baseline:		
Final energy demand (Mtoe)	86	124
CO <sub>2</sub> emissions (Mt CO <sub>2</sub> )	275	393
CO <sub>2</sub> reduction as % of 1990 emissions *	6.8%	9.7%
CO <sub>2</sub> reduction below 1990	3.6%	4.6%

\* This number also includes the avoided CO<sub>2</sub> emissions increase inherent in the baseline up to 2020 (e.g. 5.1% from 1990 level in 2020).

It is important to note that the CO<sub>2</sub> reduction below the 1990 level is a maximum estimate given that a lot of previous action can count towards the savings target in the Directive; for this calculation this point is relevant for the period up to the end of 2006 (the cut-off point for including policies in the baseline). Moreover, the baseline has rising energy prices and the effects of market forces bringing about some energy efficiency improvements. This CO<sub>2</sub> reduction is also brought about by the effects of renewables policies in place, which together with market forces are expected to increase the penetration of renewables achieved so far.

<sup>25</sup> European Energy and Transport – Trends to 2030: update 2007 (forthcoming); will be available on Europa at: [http://ec.europa.eu/energy/index\\_en.html](http://ec.europa.eu/energy/index_en.html)

## ANNEX 2: New Commission initiatives

The implementation of the Energy Efficiency Action Plan adopted in October 2006<sup>26</sup> will continue in 2008. Notable actions already adopted in 2007 were the amended Energy Star Regulation<sup>27</sup>, introducing for the first time an obligation to use energy efficiency criteria at least as demanding as the Energy Star efficiency levels in public procurement of office equipment; and a Green Paper on urban mobility<sup>28</sup>, including a proposal on financing for market introduction of efficient vehicles. The 3rd internal energy market package reinforces the requirements placed on energy regulators concerning energy efficiency. The Strategic Energy Technology Plan aims at accelerating the development of promising energy technologies and creating the conditions to bring such technologies to market. On 19 December 2007, the Commission adopted a proposal for a Regulation on emission performance standards for new passenger cars<sup>29</sup>.

In 2008 and 2009 the Commission intends adopting a number of initiatives of importance to energy efficiency.

A Communication on Sustainable Production and Consumption and Sustainable Industrial Policy will present an integrated strategy to help the EU economy become more environmentally sustainable and competitive. In 2008, the Commission intends to adopt **energy performance requirements** and/or **labelling measures** for the following product groups: public street lighting and office lighting equipment, stand-by and off-mode electricity losses, external power supplies, simple set top boxes for digital reception. In 2009, it also intends submitting for vote in the regulatory committee televisions, domestic refrigeration and freezers, washing machines, dishwashers, boilers and water heaters, personal computers, imaging equipment, commercial refrigeration, electric motors, pumps and fans. A measure on domestic lighting (incandescent bulbs) is scheduled for adoption in early 2009.

The Commission Communication entitled "Addressing the challenge of Energy Efficiency through Information and Communication Technologies" showing how **ICT can be an enabler in improving energy efficiency** in a number of sectors will be issued in early 2008.

Measures addressing **vehicles** will include a revision of the Directive on car labelling<sup>30</sup>, legislative initiatives regarding minimum efficiency requirements for mobile air-conditioning systems, the compulsory fitting of tyre pressure monitoring systems, setting maximum rolling resistance limits for tyres, and the use of gear shift indicators.

A proposal for a recast of the Directive on the **Energy Performance of Buildings**<sup>31</sup> will aim at strengthening and specifying some of its requirements (e.g. performance certificates and minimum energy performance requirements for new and existing buildings which undergo major renovation) while taking account of feasibility of implementation by the Member States.

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<sup>26</sup> Action Plan for Energy Efficiency: Realising the Potential COM(2006)545 Final

<sup>27</sup> Regulation No 2422/2001 on a Community energy efficiency labelling programme for office equipment  
<sup>28</sup> COM (2007) 551

<sup>29</sup> COM (2007) 856

<sup>30</sup> Directive 1999/94/EC

<sup>31</sup> Directive 2002/91/EC of the EP and Council on the Energy Performance of Buildings, OJ L 1, 4.1.2003, p.65

A Commission Decision on detailed guidelines for Directive 2004/08/EC on the ***promotion of cogeneration*** and a Communication on the implementation of Directive 2004/08/EC on the promotion of cogeneration will be issued.

The Commission will review the Energy Taxation Directive to facilitate more targeted and coherent use of energy taxation by integrating notably energy efficiency considerations and environmental aspects. It will also consider costs and benefits of tax credits as ***incentives for enterprises*** to produce more energy-efficient appliances ***and for consumers*** to promote the purchase of such appliances and equipment.

To improve ***energy efficiency in industrial installations***, a Reference document on Best Available Techniques regarding Energy Efficiency will be adopted in 2008 under the IPPC Directive<sup>32</sup>. The Commission will also revise its ***Community eco-management and audit scheme (EMAS)***. This voluntarily management tool requires reporting on and continuous improvement of environmental performance, including energy consumption in public and private organisations.

The Commission foresees the adoption of a Communication on ***green public procurement*** setting targets and the establishment of a process for identifying environmental specifications to be used in tender documents. It will include energy efficiency related criteria.

The Covenant of Mayors will bring together mayors of pioneering EU cities with the aim of exchanging and applying good practices improving energy efficiency significantly in the urban environment, where ***local action*** is essential. Many more initiatives promoting energy efficiency and sustainable transport, including ***changing energy behaviour*** will be supported by the Intelligent Energy-Europe programme as part of the CIP.

In contrast to action at the local level, the launch of the ***International Platform*** on Energy Efficiency will focus and contribute to strengthening energy efficiency world-wide, by facilitating closer co-operation between both developed and developing countries on energy efficiency measurement, standards and evaluation, labelling and certification, energy audits, stand-by losses, codes of conduct, and more.

The new initiatives for 2008-2009 are included in the list below.

<b>Commission energy efficiency related actions for 2008 - 2009<sup>33</sup></b>
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|---|
| <ul style="list-style-type: none"><li>• Proposal for a recast of the Directive on the Energy Performance of Buildings<sup>34</sup></li><li>• Proposal for a revision of the framework Energy Labelling Directive<sup>35</sup>:</li><li>• Eco-design<sup>36</sup> implementing measures (Commission Regulations) setting minimum energy performance requirements for 6 product groups, including a horizontal measure on the standby and off-mode consumption of electrical appliances.</li><li>• Working Plan setting out for the following 3 years the list of product groups which will</li></ul> |
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<sup>32</sup> Council Directive 96/61/EC on Integrated Pollution Prevention and Control

<sup>33</sup> The order of the actions does not reflect priority.

<sup>34</sup> Directive 2002/91/EC of the EP and Council on the Energy Performance of Buildings, OJ L 1, 4.1.2003, p.65

<sup>35</sup> Council Directive 92/75/EEC on the indication by labelling and standard product information of the consumption of energy and other resources by household appliances, OJ L 297, 13.10.1992, p.16

<sup>36</sup> Directive 2005/32/EC of the EP and Council establishing a framework for the setting of eco-design requirements for Energy-using products, OJ L191, 22.7.2005, p.29

be considered as priorities for Eco-design implementing measures

- Review of the Energy Taxation Directive to facilitate more targeted and coherent use of energy taxation by integrating notably energy efficiency considerations and environmental aspects.
- An examination, in the framework of the debate launched on VAT reduced rates, of the effectiveness of VAT reduced rates in some circumstances.
- Launch of the International Platform on Energy Efficiency.
- Launch of the Covenant of Mayors.
- Commission Decision on detailed guidelines for Directive 2004/08/EC on the promotion of cogeneration
- Commission Communication on the implementation of Directive 2004/08/EC on the promotion of cogeneration
- Proposal aiming at the reduction of CO<sub>2</sub> emission from light-duty vehicles.
- Revision of the Directive on car labelling<sup>37</sup>
- Proposal for a Regulation regarding minimum efficiency requirements for mobile air-conditioning systems, the compulsory fitting of tyre pressure monitoring systems, setting maximum rolling resistance limits for tyres, and the use of gear shift indicators.
- Commission Communication on Sustainable Production and Consumption and Sustainable Industrial Policy (SCP-SIP)
- Commission Communication "Addressing the challenge of Energy Efficiency through Information and Communication Technologies
- Commission Decision establishing the 2008 Intelligent Energy-Europe Work Programme
- Reference Document on Best Available Techniques regarding energy efficiency for industrial installations under the IPPC Directive<sup>38</sup>
- Commission Communication on green public procurement
- Revision of the EMAS Regulation<sup>39</sup>
- 2nd Strategic Energy Review

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<sup>37</sup> Directive 1999/94/EC

<sup>38</sup> Council Directive 96/61/EC on Integrated Pollution Prevention and Control

<sup>39</sup> Regulation EC No761/2001 allowing voluntary participation by organisations in a Community eco-management and audit scheme (EMAS)